

1. A method for preventing and/or treating a condition associated with calcium and/or magnesium deficiency in a human or other animal subject comprising orally administering a safe and effective amount of a mineral supplement comprising a salt selected from the group consisting of calcium 3-hydroxy-3-methylbutyrate, magnesium 3-hydroxy-3-methylbutyrate and mixtures thereof to a subject in need thereof.
2. The method of claim 1 wherein said mineral supplement comprises calcium and magnesium present at a molar ratio of from about 2:1 to about 20:1 (calcium:magnesium).
3. The method of claim 1 wherein said supplement further comprises a pharmaceutically acceptable carrier.
4. The method of claim 3 wherein said pharmaceutically acceptable carrier is present in said supplement at a concentration of from about 0.1% to about 75% by weight.
5. The method of claim 1 wherein said mineral supplement comprises calcium 3-hydroxy-3-methylbutyrate.
6. The method of claim 5 wherein said calcium 3-hydroxy-3-methylbutyrate is administered at a level of from about 100 to about 1000 mg (on an elemental calcium basis) per day.
7. The method of claim 1 wherein said mineral supplement comprises magnesium 3-hydroxy-3-methylbutyrate.
8. The method of claim 7 wherein said magnesium 3-hydroxy-3-methylbutyrate is administered at a level of from about 19 to about 190 mg (on an elemental magnesium basis) per day.

9. The method of claim 1 wherein said supplement is in the form of an oral dosage form selected from the group consisting of solid dosage forms and liquid dosage forms.

10. The method of claim 1 wherein said condition is selected from the group consisting of osteoporosis, hypertension and bone loss.

11. The method of claim 1 wherein said mineral supplement is in the form of a beverage or food product.

12. A method for providing a nutritionally supplemental amount of calcium and/or magnesium to a human or other animal subject comprising orally administering to said subject a safe and effective amount of a mineral supplement comprising calcium 3-hydroxy-3-methylbutyrate and/or magnesium 3-hydroxy-3-methylbutyrate.

13. The method of claim 12 wherein said mineral supplement comprises calcium, magnesium, or a mixture of calcium and magnesium wherein calcium and magnesium are present at a molar ratio of from about 2:1 to about 20:1 (calcium:magnesium).

14. The method of claim 12 wherein said supplement further comprises a pharmaceutically acceptable carrier.

15. The method of claim 14 wherein said pharmaceutically acceptable carrier is present in said supplement at a concentration of from about 0.1% to about 50% by weight.

16. The method of claim 15 wherein said mineral supplement is a unit dosage form.

17. The method of claim 16 wherein said unit dosage form comprises from about 730 mg to about 7,300 mg calcium 3-hydroxy-3-methylbutyrate and from about 200 mg to about 2,000 mg magnesium 3-hydroxy-3-methylbutyrate.

18. The method of claim 17 wherein said unit dosage form comprises from about 730 mg to about 2,300 mg calcium 3-hydroxy-3-methylbutyrate and from about 200 mg to about 600 mg magnesium 3-hydroxy-3-methylbutyrate.

19. A bioavailable and water-soluble composition for conjointly administering bioavailable calcium and magnesium in an oral form to a human patient or other animal in need thereof comprising (a) calcium in a water-soluble form, (b) magnesium in a water-soluble form, and (c) an edible organic acid component comprising 3-hydroxy-3-methylbutyric acid.

20. The composition of claim 19 wherein said composition is in the form of an oral dosage form selected from the group consisting of solid dosage forms and liquid dosage forms.

21. The composition of claim 19 wherein said composition comprises calcium and magnesium present at a molar ratio of from about 2:1 to about 20:1 (calcium:magnesium).

22. The composition of claim 19 wherein said composition further comprises a pharmaceutically acceptable carrier.

23. The composition of claim 22 wherein said pharmaceutically acceptable carrier is present in said composition at a concentration of from about 0.1% to about 75% by weight.

24. The composition of claim 19 wherein said composition is a unit dosage form comprising from about 730 mg to about 7,300 mg calcium 3-hydroxy-3-methylbutyrate and from about 200 mg to about 2,000 mg magnesium 3-hydroxy-3-methylbutyrate.

25. The composition of claim 19 wherein said composition is in the form of a beverage or food product.